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ABSTRACT

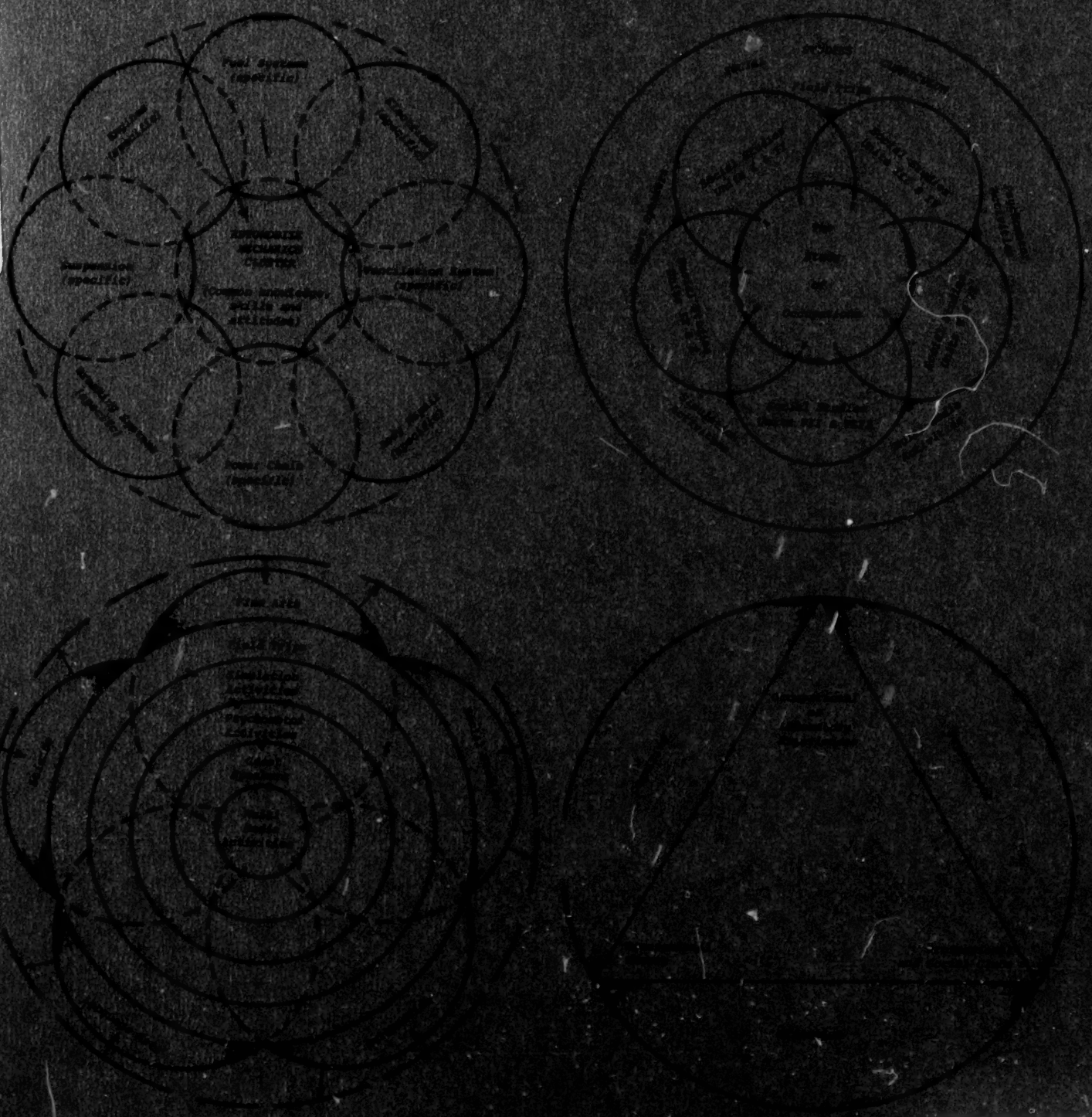
Information for the model contained in this paper was obtained through contacts and personal association with many educators and practitioners whose concern has been the need to provide information and experience to students about occupational and educational alternatives. Planned educational experiences that relate to occupations and that are provided by elementary and secondary teachers constitute the components of the career development education described in this document. These experiences include decision-making experiences, industrial visits, counseling, career games, simulations, and periodic career conferences. Components of the model are: (1) Career Awareness (for Grades K-6), (2) Career Orientations (for Grades 7 and 8), (3) Career Explorations (for Grades 9 and 10), and (4) Career Preparatory (for Grades 11 and 12). A bibliography categorized by service areas is included. (MU)

ED 064509

# Career Development Components

in

# Vocational Education: A Diagrammatic Model K-12



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## PREFACE

Career Development education in this paper concerns itself with planned educational experiences that relate to occupations. The experiences are provided by elementary and secondary education teachers.

The components of career development education in vocational education are as follows:

| | |
|---|---|
| K - 6 | Career Awareness |
| 7 - 8 | Career Orientation |
| 9 - 10 | Career Exploration |
| 11 - 12 | Career Preparatory |

The author recognizes that career development also exists in the absence of vocational education programs. There are numerous planned (academic) and unintentional activities which students experience that are a part of career development but not a part of vocational education.

Information for the model contained in this paper was obtained through contact and association with many educators and practitioners. However, the author assumes sole responsibility for the contents of this paper. Points of view do not necessarily represent official State Department of Education or Marshall University philosophy or policy.

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## *INTRODUCTION*

*Educators, parents, and the public are becoming increasingly concerned about the need to provide accurate and complete information and meaningful experiences to students about occupational and educational alternatives. Although educators are usually not concerned with attitudes concerning occupations per se, they are concerned with behavior modification in the dimension of career development.*

*According to Bandura, "the development of beneficial attitudes is often regarded as a major objective of social change endeavors."[1] He further points out that it is assumed that a correlation exists between the attitudinal domain and subsequent actions. Yet in light of this objective, Toffler states that "the more crucial the question of values (attitudes) becomes, the less willing our present schools are to grapple with it. It is no wonder that millions of young people trace erratic pathways into the future, ricocheting this way and that like unguided missiles."[2]*

*Students possess a vast repertoire of behavior which reflects attitudes about occupations and education. Many of these attitudes are based, however, on inadequate information and experiences acquired from misguided socialization agents. The process of socialization (learning attitudes and values) has for the most part in the past come about unintentionally. Attitudes about occupations and education have been formed through incidental learning which has often been based on inaccurate or faulty information. But even with inaccurate or faulty information the youth of*

today seem to possess a high degree of sophistication. Today's students do not appear to be as naive as the students of the past. Even so, thousands of students graduate from high school each year lacking a useful education.

In the agrarian society of the American Nation in former years, adult roles were quite visible. Large extended families provided uncles, aunts, grandparents, parents, and others for the young to imitate. Small factories and businesses were often found in the home. The youth were surrounded by and involved in work activities which provided the knowledge and experience upon which attitudes were formulated.

In the past, educated and literate employees were desired but by no means essential. Some of the greatest industries in the United States in the past were administered principally by men who could not speak English.[3] However, the development of a highly sophisticated body of science and experience in its application has resulted in rare occurrence of such phenomena.

Changes in American society have virtually eliminated the traditional method of gaining knowledge and experience upon which attitudes and subsequent occupational decisions are facilitated. If students who comprise the emerging labor force are to be viable members of society, it is important that they be provided with the knowledge and experience upon which future occupational decisions can be based.

The need for innovative educational programs in a period of massive technological change has long been recognized. Galbraith observed that youth has been excluded from the labor market partly because of the hardship of employment and partly to make way for educational opportunities.

*Yet, youth has not been provided with the education (at least in full and satisfactory measure) which the exemption from labor was designed to make possible.*[4]

*Congress recognized the need for "new ways to create a bridge between school and earning a living for young people"*[5] *by including a section on Exemplary Programs and Projects in the Vocational Education Amendments of 1968. One method of carrying out the purposes of Part D, Section 142, is to establish innovative model programs "designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required and the requisites for careers in such occupations.*[6] *The purposes of Part D are to "stimulate.....new ways (models) to create a bridge between school and earning a living for young people."*[7]

*Theoretical developmental models have been provided by numerous educators and practitioners. Yet a need exists for a diagrammatic model which begins with kindergarten and extends through high school. The need for strategies to implement such a model also exists.*

*Hansen suggests that present career development practices in the schools have not kept pace with theoretical developments. Traditional methods of providing career information (occupational information units, career days, etc.) need to be evaluated and possibly replaced by a sequential program, K-12. Hansen's suggestions are based on changes in vocational development theory, the nature of work and its meaning to the individual, and new information retrieval technology. The following are suggested examples of experiences that may be included in a career development program: (1) decision-making experiences, (2) industrial and educational visits, (3) counseling, (4) career games, (5) simulated decision-*

making experiences, (6) periodic visits to career guidance centers, (7) periodic career conferences, (8) job site visits, (9) reinforcement models, (10) staff career specialities, and (11) students career logs.[8]

The career development model proposed in this paper is based on the nature of sociological changes and the resulting ramifications for the individual in today's society, the vast technological advances which leave many (to use Toffler's terminology) in a state of "future shock," psychological theory of attitude formation and change which include the dimensions of affect, behavior, and cognition, and empirical and theoretical advances in career development.

Through a career development program, education can become much more relevant for Americans of all ages. However, administrators and teachers must be willing to: (1) move away from a regimented curriculum, (2) give up an authoritarian orientation, (3) bring the outside real world into the classroom, and (4) allow students to begin an educational experience at the point of interest and concern of the students.

## OVERVIEW OF THE CAREER DEVELOPMENT MODEL

Diagrammatically, the career development model takes the form shown in Figure 1. The base or horizontal axis represents the total population of students at a particular age level. Note that this model includes all of the students whether they will eventually become medical doctors, secretaries, bookkeepers, or automobile mechanics. Because existing teachers and facilities are utilized in grade levels K-8, major expenditures are not necessary for schools to implement effective programs.

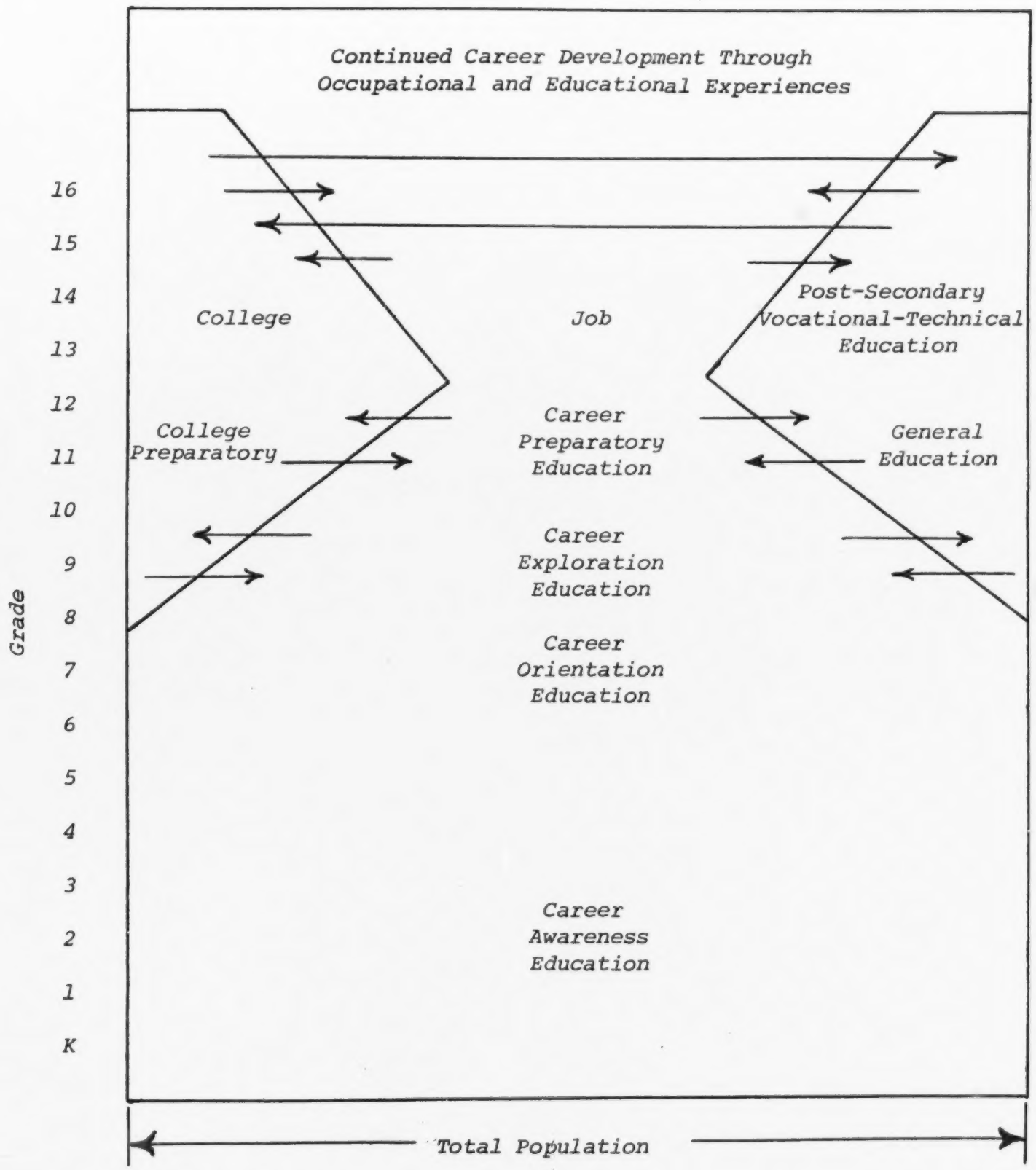


*Figure 1. Career Development K - Adulthood.*

*The options generally offered to students in their career development are college preparatory, vocational, and general education. This model contains these options. Rather than allow for vertical mobility only, horizontal mobility is suggested. Students who wish to take advantage of options other than the one they are currently enrolled in are given this prerogative. For example, vocational education students are allowed to enroll in college preparatory and/or general education courses. College preparatory and general education students are also provided with these options. The system of tracking on locking students into a prescribed structure is eliminated in this model.*

*In the study of occupations, students in the kindergarten level will begin with what they know, namely, the family. The concepts of work, duties, and responsibilities as they relate to occupations found in the home are studied with emphasis on what the children are able to do to assist other members of the family.*

*The occupational narrow base is broadened as the child ascends the educational ladder. Breadth in the study of occupations is increased each year as follows: Level one: the study of occupations of the members of the family; Level two: the study of occupations found in the community; Level three: the study of occupations found in the county; Level four: the study of occupations found in the state; Level five: the study of occupations found in the nation; and Level six: the study of occupations of a world-wide nature. Figure 2 illustrates the increasingly breadth of study as the student advances in his education.*

*In grades seven and eight the breadth of occupations is maintained within selected multi-occupational families. Occupations within each*

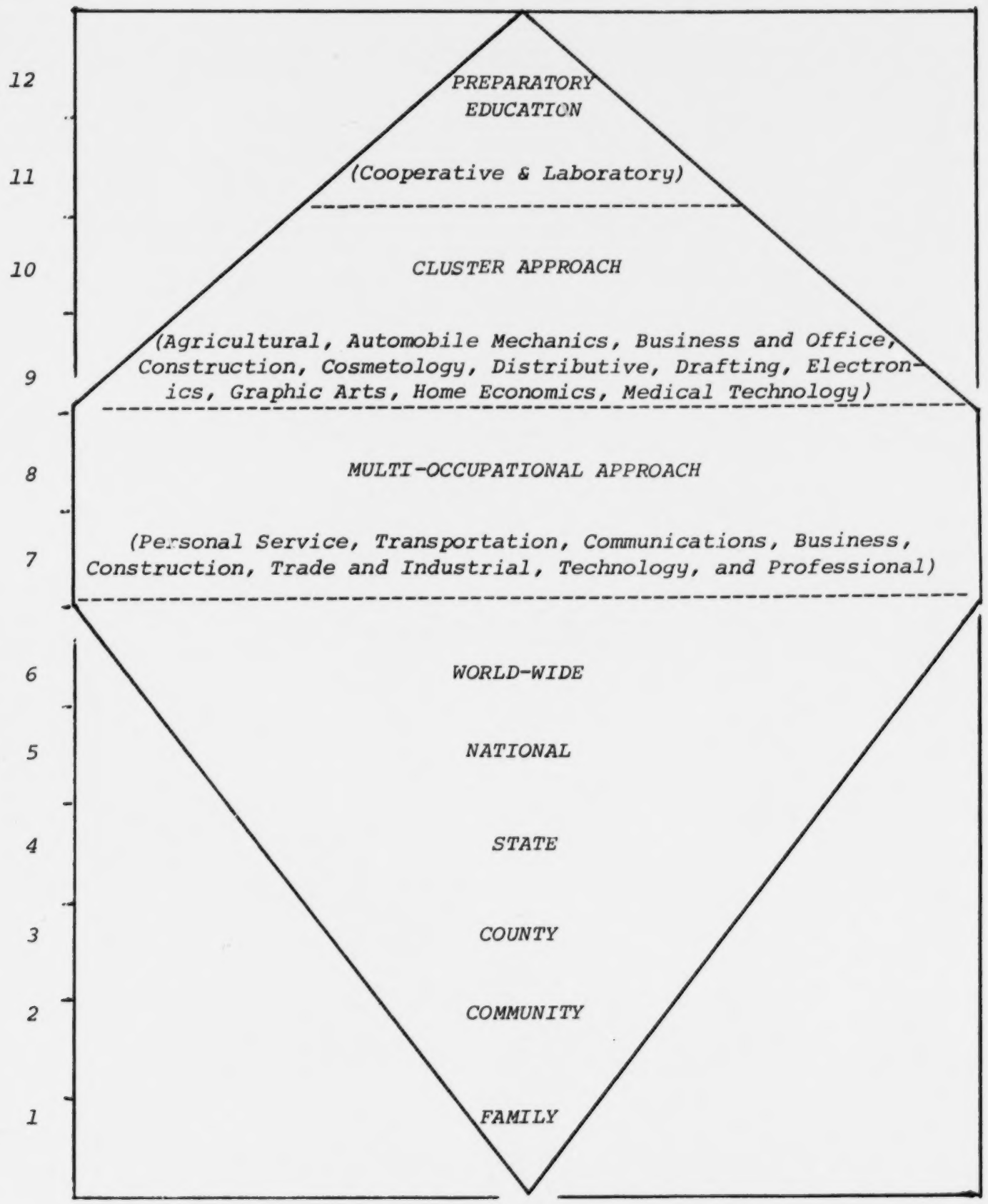


*Figure 2. Breadth of Occupations Investigated by Elementary and Secondary Students.*

multi-occupational family are selected to fit the local, State, and student needs.

During the ninth and tenth grades, the student is provided with skills, knowledge, and attitudes required for job entry into numerous occupations. The emphasis is on entry level capabilities for many occupations rather than preparation for a single occupation. The clusters utilized in the hands-on laboratory experiences may consist of the following: Agricultural, Business-Office, Construction, Cosmetology, Distributive, Drafting, Electronics, Graphic Arts, Home Economics, Medical Technology, Metal Fabrication, and Power Transportation. Depending on the cluster, the course may be taught in the industrial arts laboratory, agricultural laboratory, business laboratory, distributive laboratory, or the career center laboratories.

Career Preparatory Education is provided in the eleventh and twelfth grade levels in the occupational areas required to meet local, State, and student needs. Career Preparatory education should contain a wide representation of cooperative and laboratory programs.

The objectives for each level of the career development program are as follows:

K - 6: Provide occupational and educational experiences which will increase the student's understanding of self and occupations and produce an awareness of the occupational options available to the student in the world of work.

K - 8: Provide orientation experiences which will assist the student in identifying his abilities, aptitudes, interests, attitudes, feelings, needs, fears, and limitations in relation to the advantages and disadvantages

*of occupations within multi-occupational families.*

*9 - 10: Provide exploratory hands-on laboratory experiences in selected occupational clusters which will provide entry level skills which will aid the student in making decisions about further career education.*

*11 - 12: Provide cooperative and/or laboratory experiences with emphasis on the knowledge, skills, and attitudes necessary for employment and/or employment up-grading.*

*For the career development program to be effective, certain dimensions must be emphasized throughout the many phases of the program. The dimensions to be included are diagrammatically illustrated in Figure 3.*

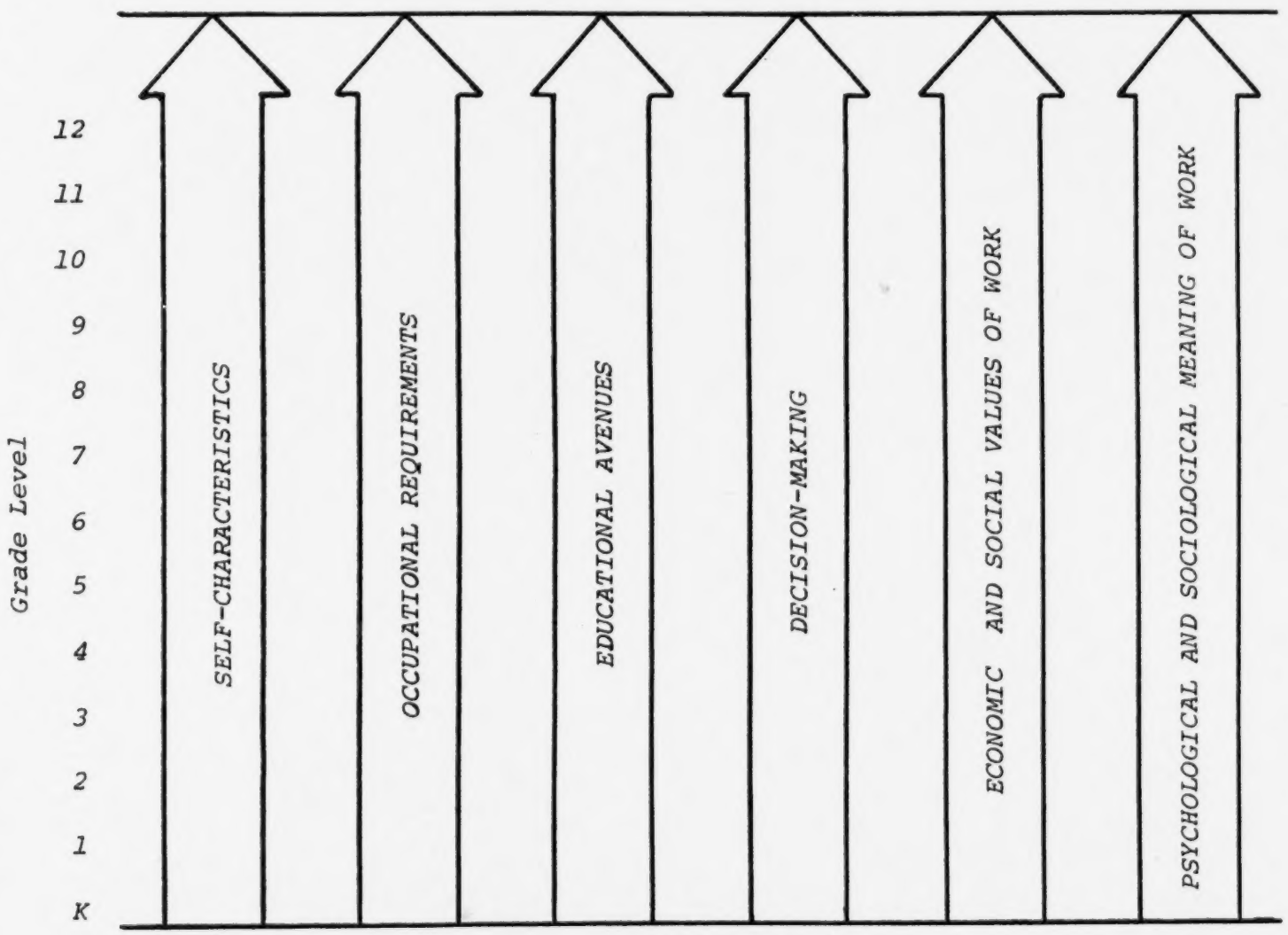


*Figure 3. Career Development Dimensions*[9]

## *CAREER AWARENESS EDUCATION*

*Students in grade levels K-6 receive occupational knowledge and experiences through the existing disciplines of social studies, mathematics, language arts, science, and fine arts. The objective of career awareness education is to provide occupational and educational experiences which will increase the student's understanding and produce an awareness of the occupational options available to the student in the world of work.*

*Through a process called curriculum blending (correlating or relating subject matter to occupational requirements), occupational information is introduced in one discipline or simultaneously in more than one discipline. The study of an occupation is introduced where interest can be stimulated.*

*The methods or techniques used to provide students with occupational knowledge and experiences are (1) Field Trips to business, industrial, and governmental institutions, (2) Simulation activities of cognitive, affective, and psychomotor nature including paper and pencil simulation, role playing, and practical hands-on simulation, (3) Psychomotor activities such as painting, drawing, printing, sewing, sawing, hammering, sanding, etc., (4) Guest Speakers representing the family, community, business, industry, and government, and (5) Multi-media activities such as books, films, slides, visuals, audio tapes, video tapes, organizational publications, etc. The methods or techniques are diagrammatically illustrated in Figure 4.*

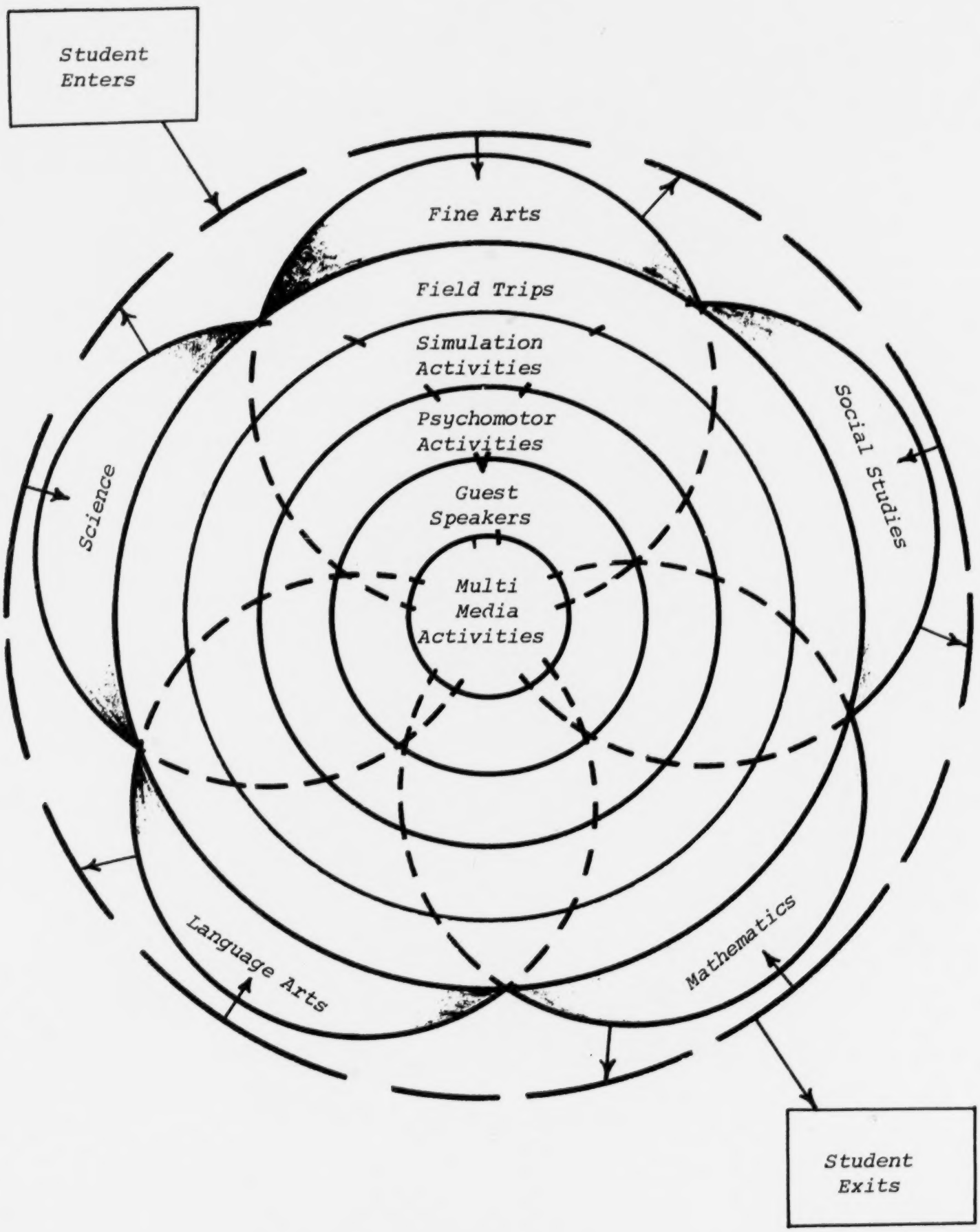


*Figure 4. Career Awareness Model.*

*The following are suggested techniques for introducing occupational clusters.*

*When the occupational cluster is of such a highly technological character that it is difficult to grasp the numerous occupations involved, interest may be stimulated through a field trip. For example in the area of computer science, curriculum blending through mathematics may spark an interest not only in computer science but also in the study of mathematics thus making mathematics more relevant to the student. Subsequently, other techniques can be used to complete the study of computer science in mathematics or other disciplines.*

*When the occupational cluster is of such a nature that the students possess knowledge of occupational roles (whether accurate or inaccurate), interest may be stimulated by role playing. The role playing may consist of acting-out occupational roles, completing a paper and pencil simulated exercise, or by being involved in a practical simulation experience (electrical wiring of a model home). The teacher and students can later compare the degree of accuracy in the first simulated exercise with knowledge gained through additional study. For example in the protective services, students will undoubtedly feel as though they understand the role of the watchman, police officer, detective, and FBI man. Curriculum blending through social studies may be used with simulated exercises as the point of entry into the study of the protective services. Subsequently other techniques and other disciplines may be used.*

*Students need to begin developing manipulative competence such as painting, drawing, printing, sewing, sawing, hammering, sanding, etc. at an early age. Because students are generally interested in manipulative activities, these activities are often an excellent entry point.*

An example of how this technique might be used as opposed to one of the others is as follows. In studying crafts of Appalachia, the teacher can interest the students in sewing (boys and girls) through curriculum blending in the discipline of fine arts. Additional occupational information can be provided through the other disciplines using psychomotor activities and other techniques.

When the occupational cluster is of such a nature that a well known person is available for group presentations, this technique may be used to stimulated interest. For example in the communications industry, curriculum blending through language arts may provide the point of entry if a reporter, news announcer, etc. is available. Other techniques and disciplines can then be utilized to further develop an understanding of the occupational cluster.

A whole host of occupational information is available to students through books, occupational briefs, business and industry displays, slides, films, visuals, audio types, video tapes, etc. The multi-media technique may prove to be the most useful approach to the introduction of an occupational cluster in the five disciplines. For example in the area of space technology, curriculum blending through the subject of science using films, tapes, etc. and existing laboratory equipment may create a lasting interest (vocational or avocational) in space technology and make science more relevant. The other techniques could subsequently be used in science or in some, all, or none of the other disciplines.

## CAREER ORIENTATION EDUCATION

Students in grade levels 7-8 receive career orientation experiences

*through one of the existing disciplines (preferably social studies) when these grades are departmentalized. When these grades are in self-contained classrooms, curriculum blending through existing disciplines is utilized.*

*The objective of career orientation education is to provide occupational experiences which will assist the student in identifying his abilities, aptitudes, interests, attitudes, feelings, needs, fears, and limitations in relation to the advantages and disadvantages of a wide range of occupations in the multi-occupational family being studied.*

*Activities will include Field Trips, Simulation Activities, Psychomotor Activities, Guest Speakers, and Multi-media Activities. (Refer to Career Awareness Education for additional information concerning these activities.)*

*The multi-occupational families suggested are as follows:*

| Grading Period | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Grade Level | 7 | Personal Services | Transportation | Communications | Business |
| | 8 | Construction | Trade and Industrial | Technology | Professional |

*The occupations within the families will be selected to meet student needs. Because many of the occupations can be found in more than one area, the teachers and administrators will arbitrarily decide which occupations are to be studied in the selected multi-occupational families. Students should be exposed to as many occupations as possible within the limitations of this program. A selection of occupations which might be studied are as follows.*

1. *Personal Service*

*Banker*
*Barbering*
*Cook/chef*
*Cosmetology*
*Fireman*
*Law Enforcement*
*Tailoring*
*Upholstering*

2. *Transportation*

*Airline Pilot*
*Dispatcher*
*Engineer*
*Navigator*
*Ship Captain*
*Steward (ess)*
*Traffic Agent*
*Truck Driver*

3. *Communication*

*Camera Man*
*Newspaper Reporter*
*Radio/TV Announcer*
*Salesman*
*Telephone Installation*
*Telephone Lineman*
*Telephone Operator*
*Time/space Salesman*

4. *Business*

*Bank Teller*
*Bookkeeper*
*Clerk-Typist*
*Key Punch Operator*
*Salesman*
*Secretary*
*Stenographer*
*Store Manager*

5. *Construction*

*Carpentry*
*Drywall Installation*
*Electrical*
*Heating A/C Installation*
*Masonry*
*Metal Working*
*Plumbing*
*Landscaping*

6. *Trade and Industrial*

*Automobile Mechanic*
*Business Machine Maintenance*
*Commercial Art*
*Commercial Photography*
*Drafting*
*Graphic Arts*
*Radio/TV Repair*
*Welding*

7. *Technology*

*Aeronautical*
*Agricultural*
*Chemical*
*Civil*
*Computer*
*Electronic*
*Forestry*
*Medical*

8. *Professional*

*Accountant*
*Architect*
*Banker*
*Dentist*
*Engineer*
*Lawyer*
*Physician*
*Teacher*

During the first six grading periods in the seventh and eighth grade levels, the occupations below the professional and highly technological are emphasized. During the last two grading periods, technological and professional occupations found in the previously studied multi-occupational families are studied. The methods or techniques for the multi-occupational career orientation model are diagrammatically illustrated in Figure 5.

## CAREER EXPLORATION EDUCATION

In the ninth and tenth grade levels, the cluster concept approach is utilized to provide entry level knowledge, skills, and attitudes in a large number of occupations.

According to Nevin Frantz,[9] former director of the Cluster Concept Project at the University of Maryland, criteria for the selection of an occupational cluster are as follows: (1) The cluster should include occupations related in the dimensions of duties, materials, finished products, or services performed. (2) The cluster should possess a large breadth of occupations requiring various skills and knowledge. (3) The cluster should consist of occupations requiring not more than a high school education and/or post-secondary education of less than baccalaureate level.

Examples of Occupational clusters to be considered in the ninth and tenth grades are Agricultural, Automobile Mechanics, Business and Office, Construction, Cosmetology, Distributive, Drafting, Electronics, Graphic Arts, Home Economics, Medical Technology, and Metal Fabrication.

The criteria for selecting occupations within the cluster are as

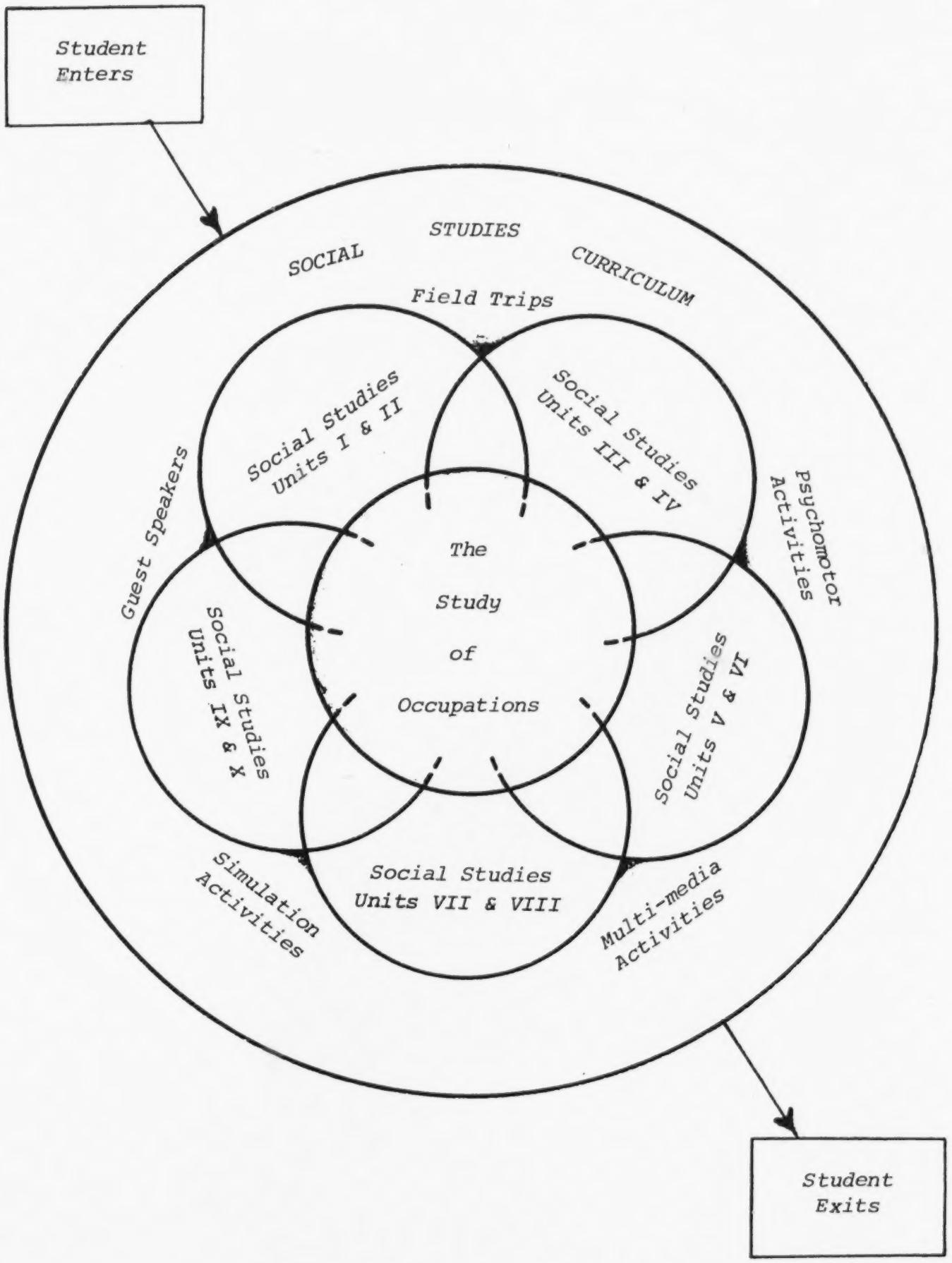


*Figure 5. Career Orientation Model.*

follows: (1) The occupation should provide good future employment opportunities. (2) The occupation should provide for entry level employment after high school graduation. (3) The occupation should allow for advancement through successful on-the-job-training or additional education. (4) The occupation should be of such a nature that numerous skills and knowledge are necessary for successful performance in the occupation.

The commonalities (elements common to all of the occupations) are taught intermittently in the learning sequence. The introduction of the cluster of occupations should begin with the commonalities and be presented in a group situation. Following the introduction, students are divided into occupations within the cluster. After the student has experienced numerous activities and developed job entry skills, he moves to a second occupation. This rotation procedure is followed until the students have experienced activities in all of the occupations offered in a cluster.

The Cluster Concept Career Exploration Model is diagrammatically illustrated in Figure 6.

## CAREER PREPARATORY EDUCATION

Education for a specific occupation is provided at the eleventh and twelfth grade levels through laboratory or cooperative occupational experiences. Through the use of existing data and community and student surveys, programs that meet student, business, and industrial needs are provided.

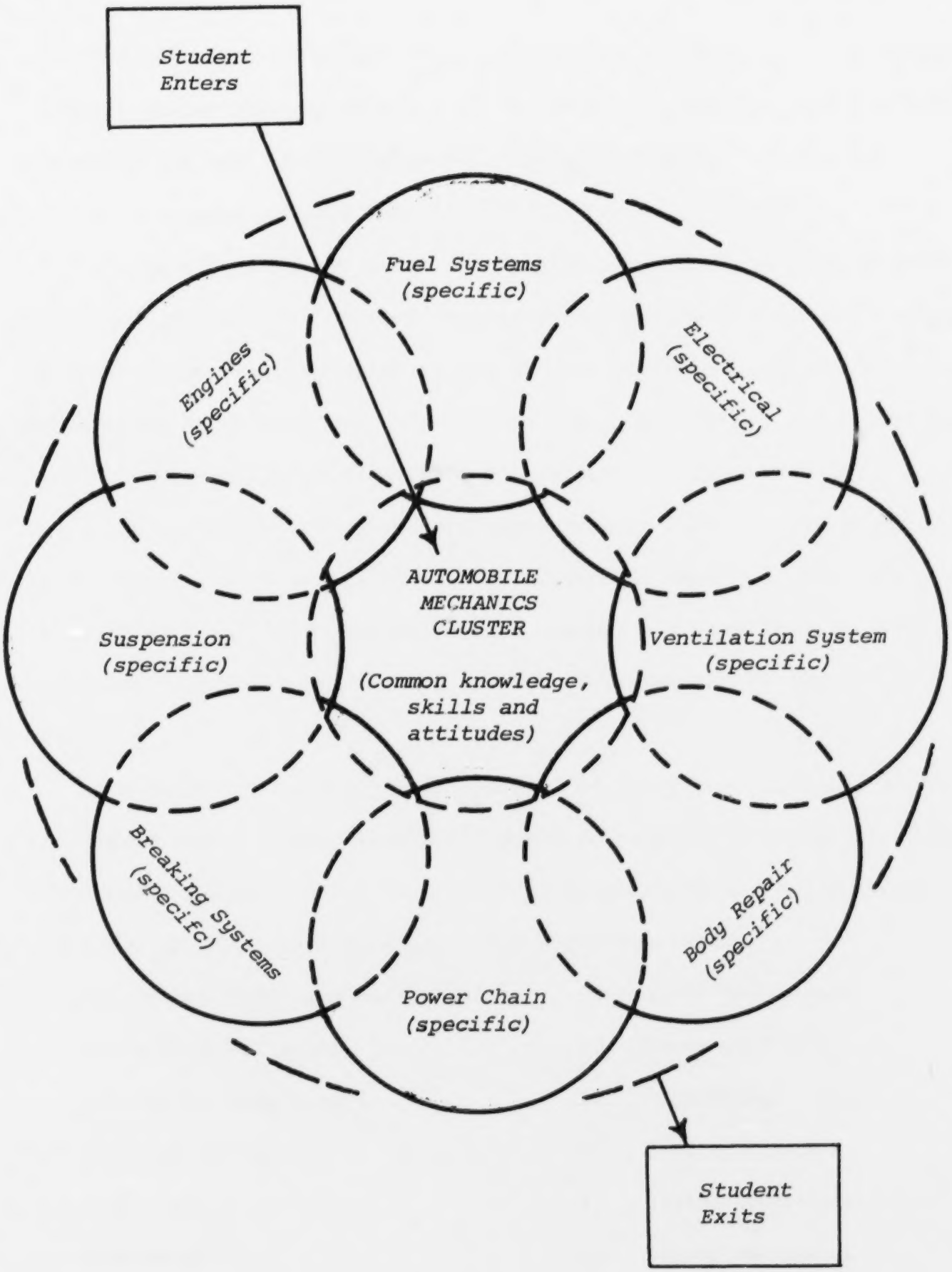


*Figure 6. Career Exploration Model.*

*The objective of career preparatory education is to provide occupational experiences with emphasis on the knowledge, skills, and attitudes necessary for employment and/or employment up-grading. The career preparatory model is diagrammatically illustrated in Fugure 7.*

*The program involves practical working arrangments between academicians and practioners, teachers and students, and the school and community. In addition to academic courses, the student actively participates in courses geared to meet his career objective. The courses are taught by teachers who have had considerable occupational experience.*

*Career Preparatory education (laboratory or cooperative) is offered to the student on a two or three hour block each day. The programs are established on a one or two year basis depending on the level of skill necessary to achieve proficiency and the requirements for license by the State.*

*The following list contains examples of laboratory programs to be considered before implementing the career preparatory phase of the career development program. This list is by no means meant to be a complete catalogue of laboratory programs which might be needed.*

1. *Air conditioning and Refrigeration*
2. *Automobile Mechanics*
3. *Automobile Body Repair*
4. *Aviation Mechanics*
5. *Barbering*
6. *Cabinetmaking*
7. *Carpentry*
8. *Chemical Technology*
9. *Civil Technology*
10. *Commercial Art*
11. *Cosmetology*
12. *Data Processing*
13. *Dental Technology*
14. *Diesel Mechanics*
15. *Drafting*
16. *Electrical Appliance Repair*

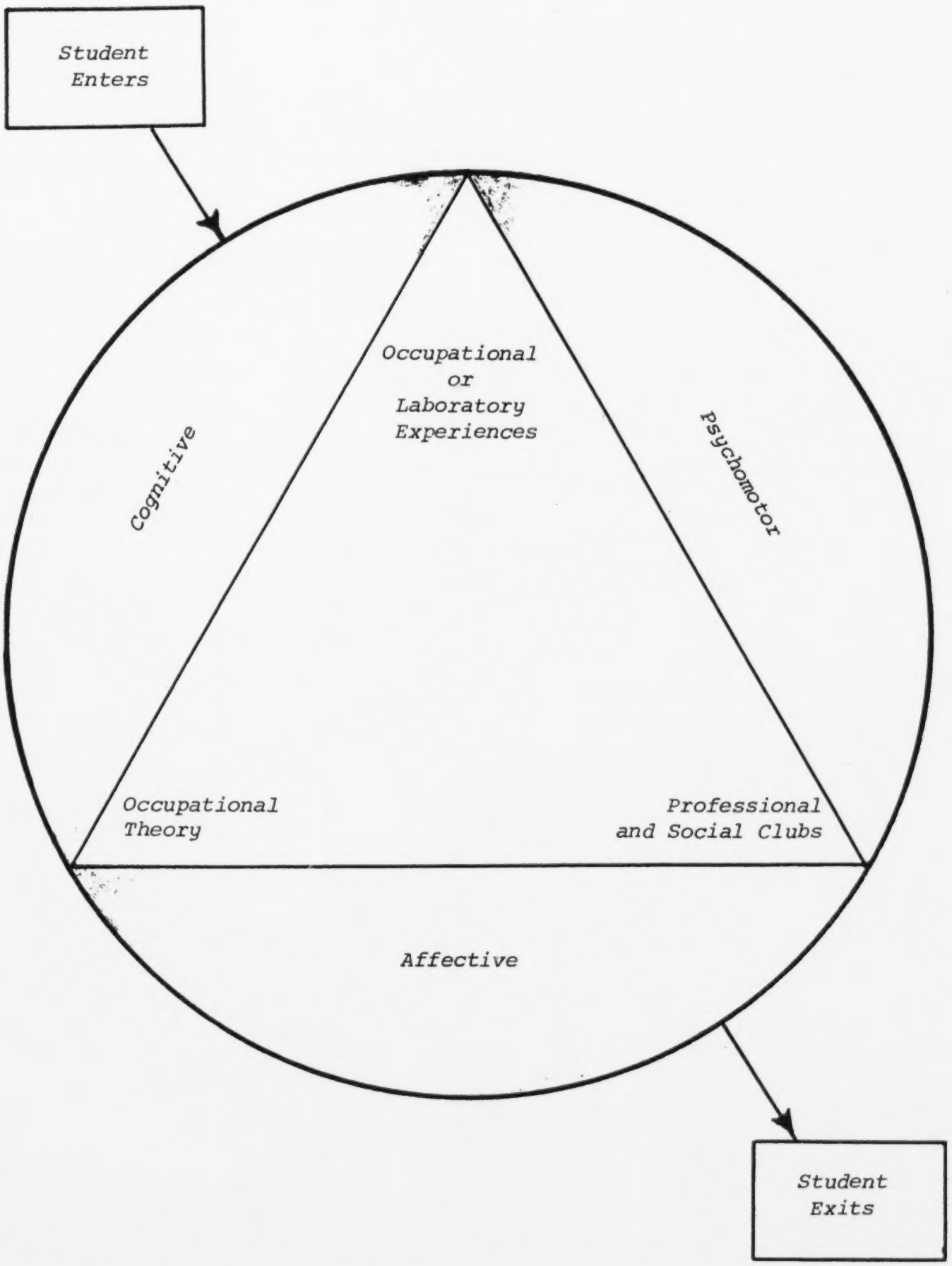


*Figure 7. Career Preparatory Model.*

17. *Electricity*
18. *Electronics*
19. *Food Service Technology*
20. *Graphic Arts*
21. *Industrial Sewing*
22. *Masonry*
23. *Machining*
24. *Medical Office Practice*
25. *Nursing Assistant*
26. *Office Machine Repair*
27. *Optical Technology*
28. *Photography*
29. *Printing*
30. *Plumbing*
31. *Radio and Television*
32. *Sheet Metal*
33. *Watch Repair*
34. *Welding*

*The following list contains examples of cooperative programs to be considered prior to the implementation of the career development program.*

1. *Cooperative Agri-business*
2. *Cooperative Business Education*
3. *Cooperative Distributive Education*
4. *Cooperative Home Economics*
5. *Cooperative Industrial Occupations*

*The selection of programs to be included in career preparatory education should be based on (1) student interests, needs, and availability, (2) employment oportunities available to the students, (3) business and industrial manpower needs, and (4) the school system's ability to finance the programs in cooperation with State and federal agencies.*

## *REFERENCES*


1. *Albert Bandura, Principles of Behavior Modification, (New York: Holt, Rinehard, and Winston, Inc., 1969), p. 595.*

2. *Alvin Toffler, Future Shock, (New York: Random House, Inc., 1970), p. 369.*

3. *John Kenneth Galbraith, The Affluent Society, (Boston: Houghton Mifflin Company, 1958), p. 213.*

4. *Galbraith, p. 262.*

5. *U. S. Congress, Vocational Education Amendments of 1968, Public law 90-576, 90th Congress (1968), 17.*

6. *U. S. Congress, 18.*

7. *U. S. Congress, 17.*

8. *Lorraine S. Hansen, "Theory into Practice: A Practitioner Looks at Career Guidance in the School Curriculum," Vocational Guidance Quarterly, Volume 16, No. 2 (December 1967), 97-103.*

9. *Gene Bottoms, Career Development Education K through Post-Secondary and Adult Education, (Huntington, West Virginia: Department of Vocational-Technical Education, Marshall University), (no date), pp. 9-15.*

10. *Nevin R. Frantz, Jr., The Development of Curriculum for a Multi-Occupational or Cluster Concept Approach to Vocational Education, (Athens, Georgia: University of Georgia, 1971), 5-7.*

## *BIBLIOGRAPHY*

*Agricultural Education*

*Business Education*

*Career Awareness and Orientation*

*Career Exploration*

*Distributive Education*

*Home Economics Education*

*Industrial Arts Education*

*Trade and Industrial Education*

## AGRICULTURAL EDUCATION


Byram, Harold M. Guidance in Agricultural Education. Danville, Illinois: The Interstate, 1959.

Drawbaugh, Charles C. and William L. Hull. Agricultural Education: Approaches to Learning and Teaching. Columbus, Ohio: Charles E. Merrill Publishing Company, 1971.

Garris, E. W. Teaching Vocational Agriculture. New York: McGraw-Hill Book Company, Inc., 1954.

Hammonds, Carsie. Teaching Agriculture. New York: McGraw-Hill Book Company, Inc., 1950.

Phillips, Lloyd J. Handbook on Agricultural Education in Public Schools. Danville Illinois: The Interstate Printers & Publishers, Inc., 1966.

Phipps, Lloyd J. Your Opportunities in Vocational Agriculture. Danville, Illinois: The Interstate, 1957.

Planning and Establishing a Cooperative Education Program For Off-Farm Agricultural Occupations in the Local Vocational Agriculture Department. Bulletin No. 10, Athens, Georgia: Department of Agricultural Education, College of Education, 1966.

Teacher's Guide For Agricultural Power and Machinery, Georgia. Athen, Georgia: College of Education, Department of Agricultural Education, 1969. (Mimeographed)

Teacher's Guide For Course In Farm Machinery Operation and Maintenance, Georgia. Athens, Georgia: College of Education, Department of Agricultural Education, 1969. (Mimeographed)

Teacher's Guide For Ornamental Horticulture, Georgia. Athens, Georgia: College of Education, Department of Agricultural Education, 1969. (Mimeographed)

Vocational Agriculture Curriculum Guide for a Course in Agriculture Business, Sales, and Services (A Cooperative Program). Athens, Georgia: College of Education, Department of Agricultural Education, 1969. (Mimeographed)

Vocational Agriculture Revised Curriculum Guide, Georgia High Schools. Athens, Georgia: College of Education, Department of Agricultural Education, 1966.

Vocational Education Curriculum Guide for a Course in Occupational Education (A Cooperative or Work Project Program), Georgia. Athens, Georgia: College of Education, Department of Agricultural Education, 1970. (Mimeographed)

## BUSINESS EDUCATION


Brown, Francis J. Final Outcome Analysis to Compare the Effectiveness of an Experimental Business Education System to Prepare Students to Secure Entry Jobs in Office and Retail Occupations (EdD dissertation). Detroit, Michigan: Wayne State University, 1968.

Calhoun, Calfrey C. et al. Development of Performance Goals for a New Office and Business Education Learnings System, Final Report, Project 91E, OEG-8-08414, 1970.

Cook, Fred S. and Frank W. Lanham. Opportunities and Requirements for Initial Employment of School Leavers with Emphasis on Office and Retail Jobs, Cooperative Research Project No. 2378. Detroit, Michigan: Wayne State University, 1966.

Cook, Fred S., F. W. Lanham, and R. Schwartz. Talent Inventory for New Office and Business Education Learnings System, Final Report, Project No. 91-b of OEG 8-08414-3773 (085). Detroit, Michigan: Department of Business and Distributive Education, Wayne State University, 1970.

Erickson, Lawrence W. New Office and Business Education Learnings Systems, Final Report, Project No. 91-D, OEG 8-08414. Los Angeles: UCLA Graduate School of Education, 1969.

Haines, Peter G. and Brendon Coleman. "State Plans for Vocational Office Occupations" in National Business Education Association Yearbook No. 4. Washington, D. C.: The Association, 1966.

Huffman, Harry, Mary Margaret Brady et al. A Taxonomy of Office Activities for Business and Office Education. Columbus, Ohio: The Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, 1968.

Huffman, Harry and Dale D. Gist. "Emergent Office Project, Abstract, NOBELS Part 91A" (duplicated in file of author), 1970.

Lanham, Frank W. (Editor). Business.Education Meets the Challenges of Changes, National Business Education Association Yearbook No. 4. Washington, D. C.: The Association, 1966.

_____. Development of Performance Goals for a New Office and Business Education Learnings System (NOBELS), USOE Proposal No. 8-0414. Columbus, Ohio: Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, 1967.

_____. A Planning Study to Determine the Feasibility of Developing a New Business and Office Education Curriculum, Moonshot--an Office Occupation Curriculum, Final Report, Project No. 7-1223. Columbus, Ohio: Center for Research and Leadership Development in Vocational and Technical Education, 1968. EDRS ED 023 894.

Lanham, Frank W. and Fred S. Cook. "Senior Intensified Program Pattern" in National Business Education Association Yearbook No. 8. Washington, D.C.: The Association (in press to April, 1970).

Lanham, Frank W. and John M. Trytten, Review and Synthesis of Research in Business and Office Education. Columbus, Ohio: Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, 1966. EDRS, ED 011 566.

Lanham, Frank W. and Cathryn P. Weber, "NOBELS Action erbs and Synonyms," Parts 1 and 2, Journal of Business Education, (in press to April and May, 1970).

McBeth, John. A Study of a Block-Time Schedule for Teaching Vocational Office Practice, Final Report, Project 201. East Lansing: Michigan State University (EDRS ED 016 830), 1967.

McCloskey, Gordon. Knowledge and Skills Required for Clusters or Families of Occupations. Pullman: Washington State University, USOE EDRS No. 257-65, 1967.

Morgan, Robert and David S. Bushnell, "Designing an Organic Curriculum," National Business Education Quarterly, 35 (Spring 1967), 5-14.

Price, Ray G. and Charles R. Hopkins. New Office and Business Education Learnings System, Final Report, Project 91F, OEG 8-08414. Minneapolis: University of Minnesota, 1970.

Tonne, Herbert A. New Office and Business Education Learning Systems, Final Report, Project 91-G, OEG 8 08414. Albany, N.Y.: Research Foundation of the State of New York, 1969.

Tonne, Herbert A. and Louis C. Nanassy, Principles of Business Education. New York: Gregg Division of McGraw-Hill Book Company, 1970.

Tuckman, Bruce W. A Study of Curriculums for Occupational Preparation and Education (SCOPE), A Progress Report. New Brunswick, New Jersey: Rutgers University, September, 1969.

## CAREER AWARENESS AND ORIENTATION

### Books


Baer, Max F. and Edward C. Roeber. Occupational Information: The Dynamics of its Nature and Use. Chicago: Science Research Associates, Incs., 1964.

Crites, John O. Vocational Psychology. New York: McGraw-Hill Book Company, 1969.

Norris, Willa. Occupational Information in the Elementary School. Chicago, Science Research Associates, Inc., 1963.

Osipow, Samuel H. Theories of Career Development. New York: Appleton-Century-Crofts, 1968.

Super, Donald E. and John O. Crites. Appraising Vocational Fitness. New York: Harper and Row Publishers, 1962.

Hoppock, Robert. Occupational Information, Where to Get It and How to Use It in Counseling and Teaching. New York: McGraw-Hill Book Company, 1967.


### Eric Documents


Career Development Activities: Grades 5, 6, 7. Abington, Pennsylvania: Abington School District, 1968. (ED 022 219.)

Goff, William, and others. Project P.A.C.E. (Preparing, Aspiring, Career Exploration). Dayton, Ohio: Dayton City School District, 1967. (ED 012 934)

Guide for Developmental Vocational Guidance, Grades K-12. Oklahoma City: Oklahoma State Department of Education, 1968. (ED 026 532)

Innovations and Special Programs in Vocational Education. Columbus, Ohio: National Association of State Directors of Vocational Education and the Center for Research and Leadership Development in Vocational and Technical Education, 1968. (ED 027 411)

Leonard, George E. Developmental Career Guidance in Action, The First Year. Detroit, Michigan: Wayne State University, 1967. (ED 013 456)

Platt, Allen H. Room to Grow: Something Special for all Kids. Philadelphia: Philadelphia School District, 1969. (ED 033 403)

Shirts, R. G. Career Stimulation for Sixth Grade Pupils. San Diego: Department of Education, 1966. (ED 010 076)

Tyson, Kenneth L. Resource Guide to Selected Materials for the Slow Learners. Gettysburg, Pennsylvania: Adams County Public Schools, 1968. (ED 030 921)

*Periodicals*

*Cook, Helen E. "Occupational Information and Fine Arts," Georgia Educator. September, 1970.*

*Crews, A. C. "Career-Oriented Curriculum: Cobb County Model." American Vocational Journal. Vol. 44, 1969.*

*Goodson, Sylvia. "Occupational Information Materials in Selected Elementary and Middle Schools," Vocational Guidance Quarterly.*

*Hansen, Loraine S. "Theory Into Practice: A Practitioner Looks at Career Guidance in the School Curriculum," The Vocational Guidance Quarterly. Vol. 16, No. 2, December, 1967.*

*Leonard, George E. "Vocational Planning and Career Behavior: A Report on the Developmental Career Guidance Project," Educational Technology. Vol. 9, No. 3, 1969*

*Murusic, S. S. "Use of Occupational Drawings to Enhance Vocational Development," Personnel and Guidance Journal. Vol. 47, 1969.*

*Osipow, Samuel H., and R. D. Adlerfer. "The Effects of a Vocationally Oriented Speech Course on the Vocational Planning Behavior of High School Students," Personnel and Guidance Journal. Vol. 47, 1968.*

*Vairo, P. D. "Occupational Information: Need of American Youth," Catholic Educational Review. Vol. 63, 1965.*

*Venn, Grant. "Occupational Education for Everyone," National Association of Secondary School Principals Bulletin. December, 1968.*

*Other Sources*

*Dictionary of Occupational Titles. Volume 1. 3rd ed. Washington, D. C.: U. S. Department of Labor, Manpower Administration, 1965.*

*Occupational Information for Grades Three through Eight. Atlanta, Georgia: Occupational Information Materials Project, Atlanta Public Schools, 1968.*

*Scott, Marion H. Georgia's Program of Education and Career Exploration at the Junior High School Level. Raleigh, North Carolina: Paper presented to Institute VI, 1970.*

*Selected Bibliography of Occupational Literature for Grades Three through Eight. Atlanta, Georgia: Occupational Information Materials Project, Atlanta Public Schools, 1968.*

## *CAREER EXPLORATION*


*Maley, Donald. "The Cluster Concept Chance for Occupational Exploration," American Vocational Journal. 42:22, October, 1967.*

*Maley, Donald. The Implementation and Further Development of Experimental Cluster Concept Programs Through Actual Field Testing and Evaluation at the Secondary School Level, Phase III. University of Maryland, Project No. 7-0853, Grant No. OEG-0-8-000853-1865 (085), 1968.*

*Maley, Donald. An Investigation and Development of the Cluster Concept as a Program in Vocational Education at the Secondary School Level, Phase I. University of Maryland, Contract No. OE 685-023, Vol. I: Final Report, Vol. II: Construction Cluster Outline, Vol. III: Electro-Mechanical Installation and Repair Cluster Outline, Vol. IV: Metal Forming and Fabrication Cluster Outline, 1966.*

*Maley, Donald. The Preparation of Curriculum Materials and the Development of Teachers for an Experimental Application of the Cluster Concept of Vocational Education at the Secondary School Level, Phase II. University of Maryland, Project No. 6-2312, Grant No. OEG 2-7-062312-0175, Vol. I: Final Report, Vol. II: Instructional Plans for the Construction Cluster, Vol. III: Instructional Plans for the Metal Forming and Fabrication Cluster, Vol. IV: Instructional Plans for the Electro-Mechanical Installation and Repair Cluster, 1967.*

*Geissenhainer, Samuel W. "The Cluster Concept in Operation," American Vocational Journal. 42:26, October, 1967.*

*Olson, Jerry C. "The Marriageability of Vocational Education," School Shop. 25:29, October, 1965.*

*Schmidle, Joseph T. "Comprehensive and Cluster," School Shop. 28:111, April, 1969.*

*Sheets, Don R. and Hollis W. Dahlor. "The Cluster Concept: Kansas City Style," American Vocational Journal. 42:24, October, 1965.*

*Turnquist, Carl H. "Galaxy Approach to Education for the World of Work," Industrial Arts and Vocational Education. 25:25, November, 1965.*

## *DISTRIBUTIVE EDUCATION*


*Crawford, Lucy C. (Prin. Invest.) A Competency Pattern Approach to Curriculum Construction in Distributive Education. Vol. 1: U. S. Office of Education, Grant No. OE-6-85-044, December, 1967.*

*Crawford, Lucy C. (Prin. Invest.) A Competency Pattern Approach to Curriculum Construction in Distributive Education. Vol. II (Department and Variety Stores): U. S. Office of Education, December, 1967.*

*Crawford, Lucy C. (Prin. Invest.) A Competency Pattern Approach to Curriculum Construction in Distributive Education. Vol. III (Food Stores, Service Stations, and Wholesaling): U. S. Office of Education, December, 1967.*

*Crawford, Lucy C. (Prin. Invest.) A Competency Pattern Approach to Curriculum Construction in Distributive Education. Vol. IV (Hotel/Motel and Restaurants): U. S. Office of Education, December, 1967.*

*Crawford, Lucy C. (Prin. Invest.) A Competency Pattern Approach to Curriculum Construction in Distributive Education. Vol. V (Phase II: Professional and Technical Objectives, Phase III: National Dissemination and Interpretation Seminar in Distributive Teacher Education Curriculum Development): U. S. Government Printing Office, 1969.*

*Distributive Education Curriculum. Harrisburg, Pennsylvania: The Bureau of Vocational, Technical and Continuing Education, (no date).*

*Distributive Education in the High School. Washington: U. S. Government Printing Office, 1969.*

*Samson, Harland E. (ed) The Dunwoody Papers. Madison: University of Wisconsin, 1967.*

*Hawkins, Oma Rebecca. The Construction and Classification of Educational Objectives to Develop Selling Competencies Needed by Workers in the General Merchandise Category of Distribution. Blacksburg: Virginia Polytechnic Institute, 1968.*

*Meyer, Warren G. (Prin. Invest.) Pilot Training Project Based on Directed Occupational Experience for Teachers of Marketing and Distribution. Office of Education, Grant No. OEG-3-6-061594-0680, June 30, 1967.*

## HOME ECONOMICS


Bernard, J. and Chilman, C. "Changing Lifestyles for Women--Their Significance to Families," Journal of Home Economics, LXII, (October, 1970), 575-583.

Byrd, F. M. "A Definition of Home Economics for the Seventies," Journal of Home Economics, LXII (June, 1970), 411-415.

Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development. Washington: American Home Economics Association, 1967.

"Conference on Contemporary Issues in Home Economics Education," Journal of Home Economics, LVII (November, 1965), 701-704.

Creekmore, A. M. "The Concept Basic to Home Economics," Journal of Home Economics, LX (February, 1968), 93-99.

"Curriculum Trends," Tips and Topics, IX (April, 1969), 2-5.

Dobry, A. "Occupational Programs in Home Economics," American Vocational Journal, XLIV (October, 1969), 56-58.

East, M. "Family Life by the Year 2000," Journal of Home Economics, LXII (January, 1970), 13-18.

Fleck, H. "Surging into the Seventies," Forecast for Home Economics, XV (April, 1970), F15, F29.

Flunderburk, K. W. "Home Economics Moves Out to Meet the Challenge of Social Change," American Vocational Journal, XLII (September, 1967), 31-32.

"Guidelines for Home Economics Education in Secondary Schools," American Vocational Journal, XLV (January, 1970), 55-56.

Henderson, G.M. "Issues Confronting Home Economics in Colleges and Universities," Journal of Home Economics, LVII (December, 1965), 759-764.

Hill, A. D. "Home Economics Education," American Vocational Journal, XLII (March, 1967), 38-39.

Hurt, M. L. Current Developments in Vocational Home Economics Education. Division of Vocational and Technical Education, Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare, (September, 1970).

Hurt, M. L. and Alexander, M. "New Challenges for Home Economics Educators," Journal of Home Economics, LXI (December, 1969), 771-775

McConnell, E. "The History of Home Economics Education," Forecast for Home Economics, XV (September 1970), F86-F87.

McGrath, E. J. "The Changing Mission of Home Economics," Journal of Home Economics, LX (February, 1968), 85-92.

McGrath, E. J. "The Imperatives of Change For Home Economics." Journal of Home Economics, LX (September, 1968), 505-511.

Magrabi, F. M. "The Image of Home Economics Courses as General Education," Journal of Home Economics LXII (January, 1970), 43-48.

Mallory, B. "Home Economics Today," American Vocational Journal, XLI (February, 1967), 3-32.

Nelson, H. Y. Review and Synthesis of Research on Home Economics Education. Second Edition. Columbus, Ohio: The Center for Vocational and Technical Education, Ohio State University, 1970.

Quigley, E. E. Introduction to Home Economics. London: The Macmillan Company, 1969. (Published in U. S. branch)

Simpson, E. J. "Challenges in Curriculum Development in Home Economics," Journal of Home Economics, LX (December, 1968), 767-773.

"Home Economics for the Seventies: Accent on Nutrition for Consumers." Illinois Teacher for Contemporary Roles, XIV (September-October, 1970). Entire issue. Other issues during the year will highlight other areas of home economics education.

Smith, M. L. "Innovations in Home Economics in North Carolina," American Vocational Journal, XLV (March, 1970), 70-71

Tenney, Gertrude. "An Open-Ended Program in Gainful Home Economics," American Vocational Journal, XLV (April, 1970), 62-63.

## INDUSTRIAL ARTS

### Books


Bennett, C. A. History of Manual and Industrial Education Up to 1870. Peoria, Illinois: Manual Arts Press, 1926.

Bennett, C. A. History of Manual and Industrial Education 1870-1917. Peoria, Illinois: Manual Arts Press, 1937.

Cochran, Leslie H. Innovative Programs in Industrial Education. Bloomington, Illinois: McKnight & McKnight, 1970.

Ericson, Emanuel E. Teaching the Industrial Arts. Peoria, Illinois: C. A. Bennett Co., 1960.

Roberts, Roy W. Vocational and Practical Arts Education. New York: Harper and Row, 1965.


### Periodicals


"Anatomy of the AIAA," The Journal of Industrial Arts Education, Nov.-Dec., 1964. (special excerpt)

Bohn, Ralph C. "Implementing Promising Curriculum Changes in Industrial Arts," IAVE, 57:31-ff, Oct. 1968.

Cochran, Leslie H. "A Closer Look at Selected Contemporary Programs in Industrial Education," Journal of Industrial Teacher Education, Winter 1970, pp. 40-49.

Pautler, Albert J. "A Conceptual Curriculum for Industrial Arts and Occupational Education," IAVE, Sept. 1968, pp. 26-ff.

The Journal of Industrial Arts Education. Nov. - Dec. 1969.

Tischler, Morris. "Systems Approach--Modern Technology in Skills Training," IAVE, September, 1968.


### Publications


"A New Industrial Arts," A prospectus by Delmar W. Olson, Coordinator, Graduate Studies in Industrial Arts, Department of Industrial and Technical Education, North C rolina State University, Raleigh, N. C., Mayll, 1968.

DeVore, Paul. Curriculum Focus: Occupations and the World of Work. Information Series 5. Morgantown, W. Va.: Office of Research and Development, 1969.

Guide for Industrial Arts Education in South Carolina Schools. Columbia, S. C.: South Carolina State Department of Education, 1963.

## TRADE AND INDUSTRIAL


Bjorkquist, David and Wiersteiner, Richard. "Trade and Industrial Education: A Research Critique and Model for Action," Vocational-Industrial Educational Research Report. Vocational Education Department, Penn State University, No. 1, March, 1968.

McDowell, L. C. "Trade and Industrial Teacher Education in the 1970's" Journal of Industrial Teacher Education. Vol. 7, No. 4, Spring - 1970, pp. 58-60.

Schatz, Gene A. "Stretching Industrial Education Strategy into the Summer," School Shop. Vol. XXIX, No. 8, April 1970, p. 124.

Woodruff, Asahel D. "Human Behavior, The Curriculum, and Personal Involvement," Research Paper. The University of Utah, January 26, 1970.

Report on Occupational Education in the South. We Shall Not Rest. Vol. 19, No. 8, May 1967.

The National Goals of Trade and Industrial Education. U. S. Department of Health, Education and Welfare, May 1968.

Third Report, National Advisory Council on Vocational Education, Vocational Education Amendments of 1968. Public Law 90-576, July 10, 1970.

Vocational Industrial Clubs of America. Official Guide, Vocational Industrial Clubs of America, 1965.